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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SMITH, PETER J

ART UNIT PAPER NUMBER

2176

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/526,031

Applicant(s)

HULL ET AL.

Examiner

Peter J Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-17,19-29,31-41 and 43-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-17,19-29,31-41 and 43-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: amendment filed 9/2/2004.
2. Claims 1-5, 7-17, 19-29, 31-41, and 43-52 are pending in the case. Claims 1, 13, 25, and 37 are independent claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-4, 7, 13-16, 19, 25-28, 31, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Schena et al. (hereinafter "Schena"), US 6,448,979 B1 filed 1/25/1999.**

Regarding independent claims 1, 13, and 25, Schena discloses creating a multimedia annotation for a paper document, the multimedia annotation representing at least one of an audio sound and a video clip in col. 2 lines 6-8. Schena discloses creating a first multimedia document by combining the paper document and the multimedia annotation such that the multimedia annotation can be extracted and decoded subsequently from the first multimedia document and played via a multimedia player, wherein the first multimedia document is generated as a part of reproducing the paper document via a document reproduction system in col. 1 line 61 – col. 2 line 25. Schena reproduces a multimedia document by adding computer readable codes, such as bar codes, into the paper document.

Regarding dependent claims 2, 14, and 26, Schena discloses wherein the multimedia annotation is represented as a first bar code printed on the multimedia document in col. 3 lines 58-63.

Regarding dependent claims 3, 15, and 27, Schena discloses wherein the first bar code encodes an audio sound in col. 1 line 61 – col. 2 line 25.

Regarding dependent claims 4, 16, and 28, Schena discloses wherein a location indicator associated with the multimedia annotation is placed on the first multimedia document, wherein the location indicator indicates where the multimedia annotation can be retrieved and played in col. 1 line 61 – col. 2 line 25.

Regarding dependent claims 7, 19, and 31, Schena discloses wherein the first multimedia document is capable of being extracted by scanning and decoding the printed annotation of the paper document, and wherein the extracted multimedia annotation can be played via a multimedia player.

Regarding dependent claim 44, Schena discloses wherein the multimedia document is a physical document having the first bar code printed thereon, wherein the audio sound can be extracted from the multimedia document by scanning and decoding the first bar code, and wherein the extracted audio sound is capable of being played via an audio player in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schena et al. (hereinafter "Schena"), US 6,448,979 B1 filed 1/25/1999 in view of Gormish et al. (hereinafter "Gormish"), US 5,337,362 patented 8/9/1994.

Regarding dependent claims 5, 17, and 29, Schena teaches wherein the location indicator comprises a first Uniform Resource Locator (URL) in col. 3 line 64 – col. 4 line 6. Schena does not teach representing a URL in an encrypted form. Gormish does teach representing a URL in an encrypted form in the abstract, fig. 8-9, and col. 2 lines 17-40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Gormish into Schena to have created the claimed invention. It would have been obvious and desirable to have used the URL encryption teaching of Gormish to have enhanced the URL barcode of Schena so that access to the multimedia annotation would have been secure in the event the multimedia document is acquired by an unauthorized user.

6. Claims 8-10, 20-22, 32-34, 37-41, and 45-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schena et al. (hereinafter "Schena"), US 6,448,979 B1 filed 1/25/1999 in view of Robinson et al. (hereinafter "Robinson"), "The Origami Project: Paper Interfaces to the World-Wide Web", [http://www.cl.cam.ac.uk/Research/Origami/Origami1997f/index.html], submitted to Webnet 97 in November 1997, pages 1-6.

Regarding dependent claims 8, 20, and 32, Schena teaches creating a multimedia document composed of paper document and one or more multimedia annotations in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6. Schena does not teach generating an image of the paper document, the image of the paper document being unconsciously captured during the reproduction of the paper document without user intervention. Schena does not teach creating a second multimedia document by combining the image of the paper document and the multimedia annotation, wherein the multimedia annotation is captured via an input device of the document reproduction system while the paper document is being reproduced via the document reproduction system. Schena does not teach storing the image of the paper document and the multimedia annotation in a storage.

Robinson does teach generating an image of the paper document, the image of the paper document being unconsciously captured during the reproduction of the paper document without user intervention and creating a second multimedia document by combining the image of the paper document and the multimedia annotation, wherein the multimedia annotation is captured via an input device of the document reproduction system while the paper document is being reproduced via the document reproduction system in fig. 1, page 4 paragraphs 1-4. The document image acquired by the camera system may be combined with one or more other documents or multimedia annotations. The newly created document is the second multimedia document. Robinson does teach storing the image of the paper document and the multimedia annotation in a storage in fig. 1 and the “Registry” section in pages 2-3. Robinson’s storage is called the registry, which stores the second multimedia document.

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Regarding dependent claims 9, 21, and 33, Schena teaches wherein a multimedia document is represented as a second Uniform Resource Locator (URL) printed on the first multimedia document, and wherein the image of the paper document and the multimedia annotation is accessed with the second URL in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6.

Regarding dependent claims 10, 22, and 34, Schena teaches wherein a bar code is used to represent a second URL in col. 3 lines 58-63.

Regarding independent claim 37, Schena teaches creating a paper document to be used with a multimedia annotation in col. 1 line 61 – col. 2 line 25. Schena teaches creating a multimedia annotation, the multimedia annotation representing at least one of an audio sound and a video clip in col. 2 lines 6-8. Schena teaches creating a multimedia document by combining the paper document and the multimedia annotation such that the multimedia annotation can be extracted and decoded subsequently from the first multimedia document and played via a multimedia player, wherein the storing and the combining are performed as a part of reproducing the paper document via a document reproduction system without user intervention in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6. Schena does not teach storing an image of the paper document.

Robinson does teach storing an image of the paper document and the multimedia annotation in fig. 1, page 4 paragraphs 1-4. The document image acquired by the camera system may be combined with one or more other documents or multimedia annotations. Robinson stores the image in the registry. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Robinson into Schena to have created the

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claimed invention. It would have been obvious and desirable to have used the paper document image acquisition teaching of Robinson to have acquired an image of the paper document so that the new multimedia document could have been merged and produced digitally as is taught by Robinson.

Regarding dependent claim 38, Schena teaches creating a paper multimedia document by associating the multimedia annotation with the paper document in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6. Schena does not teach creating an electronic multimedia document by associating the multimedia annotation with the image of the paper document, wherein the image of the paper document is captured while the paper document is being reproduced using the document reproduction system. Robinson does teach creating an electronic multimedia document by associating the multimedia annotation with the image of the paper document, wherein the image of the paper document is captured while the paper document is being reproduced using the document reproduction system in fig. 1, page 4 paragraphs 1-4. The document image acquired by the camera system may be combined with one or more other documents or multimedia annotations. Robinson stores the image in the registry.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Robinson into Schena to have created the claimed invention. It would have been obvious and desirable to have used the electronic multimedia document creation ability of Robinson to have created an electronic multimedia document corresponding to the paper multimedia document so that the system could have had an immutable copy of the multimedia document as is taught by Robinson in case the paper multimedia document is damaged or destroyed.

Regarding dependent claim 39, Schena teaches wherein the multimedia annotation associated with the paper multimedia document is represented as a first bar code printed on the paper multimedia document, wherein the first bar code encodes an audio sound, wherein the first bar code printed on the paper multimedia document is capable of being extracted by scanning and decoding the first bar code printed on the paper multimedia document, and wherein the extracted first bar code can be played via a multimedia player in col. 1 line 61 – col. 2 line 25 and col. 3 lines 58-63.

Regarding dependent claim 40, Schena teaches wherein a location indicator of the multimedia annotation associated with the paper multimedia annotation is placed on the paper multimedia document, wherein the location indicator indicates where the multimedia annotation can be retrieved and played in col. 1 line 61 – col. 2 line 25.

Regarding dependent claim 41, Schena teaches wherein the location indicator comprises a Uniform Resource Locator (URL), and a second bar code, wherein the URL is indicated in plain text, and wherein the second bar code represents the URL in col. 3 line 58 – col. 4 line 6.

Regarding dependent claims 45 and 46, Schena teaches capturing an audio sound of the multimedia annotation from a user using a microphone of the input device to annotate the paper document to create a multimedia paper document in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6. Schena does not specifically indicate at what point in time or with what event the multimedia annotation is created. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Schena to have automatically captured an audio sound annotation for the paper document when the paper document was being

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reproduced so that the multimedia annotation is relevant to both the user and the paper document.

Regarding dependent claims 47 and 48, Schena teaches capturing a video clip of the multimedia annotation from a user using a video camera of the input device to annotate the paper document to create a multimedia paper document in col. 1 line 61 – col. 2 line 25 and col. 3 line 64 – col. 4 line 6. Schena does not specifically indicate at what point in time or with what event the multimedia annotation is created. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Schena to have automatically captured a video clip annotation for the paper document when the paper document was being reproduced so that the multimedia annotation is relevant to both the user and the paper document.

Regarding dependent claim 49, Schena does not teach in response to a request to retrieve a second multimedia document, performing a content-based search for the requested multimedia document within the storage based on the content of the multimedia annotation associated with the requested multimedia document. Robinson does teach parsing and indexing the multimedia documents contained in the registry for retrieval in fig. 1 and the “Registry” section in pages 2-3. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Robinson into Schena to have created the claimed invention. It would have been obvious and desirable to have used the registry index of Robinson to have searched and located the appropriate multimedia document to retrieve.

Regarding dependent claim 49, Schena does not teach wherein the content-based search is performed by OCR, audio speech recognition, or video face recognition techniques on the multimedia annotations of the multimedia documents being searched. Robinson does teach

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parsing and indexing the contents of the multimedia documents contained in the registry using OCR, audio speech recognition, or video face recognition techniques in fig. 1 and the "Registry" section in pages 2-3. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Robinson into Schena to have created the claimed invention. It would have been obvious and desirable to have used the registry index of Robinson to have searched and located the appropriate multimedia document to retrieve.

7. Claims 11, 23, 35, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schena et al. (hereinafter "Schena"), US 6,448,979 B1 filed 1/25/1999 in view of Robinson et al. (hereinafter "Robinson"), "The Origami Project: Paper Interfaces to the World-Wide Web", [http://www.cl.cam.ac.uk/Research/Origami/Origami1997f/index.html], submitted to Webnet 97 in November 1997, pages 1-6 as applied to claims 8, 20, 32, and 38 above, and further in view of Cunningham, US 6,208,436 B1 filed 2/9/1998.

Regarding dependent claims 11, 23, and 35, Schena does not teach automatically sending a second multimedia document to a recipient by electronic mail as a part of reproducing the paper document via the document reproduction system, wherein the recipient is specified by a user via an interface of the document reproduction system when the user reproduces the paper document using the document reproduction system. Cunningham does teach automatically sending a second document to a recipient by electronic mail as a part of reproducing the paper document via the document reproduction system, wherein the recipient is specified by a user via

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an interface of the document reproduction system when the user reproduces the paper document using the document reproduction system in fig. 3-4, 6-7, and col. 5 lines 59-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Cunningham into Schena in view of Robinson to have created the claimed invention. It would have been obvious and desirable to have used the automatic document emailing of Cunningham to have improved Schena in view of Robinson so that the multimedia document could have been shared with other users for multi-user document collaboration as is taught by Cunningham in col. 4 lines 26-39.

Regarding dependent claim 43, Schena does not teach automatically sending the electronic multimedia document to a recipient as a part of reproducing the paper document via the document reproduction system, wherein the recipient receives the electronic multimedia document in the form of an attachment to an electronic mail, wherein the recipient is specified by a user via an interface of the document reproduction system when the user reproduces the paper document using the document reproduction system. Cunningham does teach automatically sending the electronic multimedia document to a recipient as a part of reproducing the paper document via the document reproduction system, wherein the recipient receives the electronic multimedia document in the form of an attachment to an electronic mail, wherein the recipient is specified by a user via an interface of the document reproduction system when the user reproduces the paper document using the document reproduction system in fig. 3-4, 6-7, and col. 5 lines 59-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Cunningham into Schena in view of Robinson to have created the

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claimed invention. It would have been obvious and desirable to have used the automatic document emailing of Cunningham to have improved Schena in view of Robinson so that the multimedia document could have been shared with other users for multi-user document collaboration as is taught by Cunningham in col. 4 lines 26-39.

8. Claims 12, 24, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schena et al. (hereinafter "Schena"), US 6,448,979 B1 filed 1/25/1999 in view of Robinson et al. (hereinafter "Robinson"), "The Origami Project: Paper Interfaces to the World-Wide Web", [<http://www.cl.cam.ac.uk/Research/Origami/Origami1997f/index.html>] and Cunningham, US 6,208,436 B1 filed 2/9/1998 as applied to claims 11, 23, and 35 above, and further in view of Halliday et al., US 5,880,740 filed 7/12/1996.

Regarding dependent claims 12, 24, and 36, Schena does not teach wherein the recipient receives the image of the paper document and the multimedia annotation in the form of Multi-purpose Internet Mail Extension (MIME). Halliday does teach sending an image of a document in the form of Multi-purpose Internet Mail Extension (MIME) in col. 8 lines 5-28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Halliday into Schena in view of Robinson and Cunningham to have created the claimed invention. It would have been obvious and desirable to have used the Multi-purpose Internet Mail Extension (MIME) teaching of Halliday to have implemented the automatic sending of the electronic multimedia document of Schena in view of Robinson and Cunningham so that the recipient would have used any common email client to have received the electronic multimedia document sent from the user.

Response to Arguments

9. Applicant's arguments with respect to claims 1-5, 7-17, 19-29, 31-41, and 43-52 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dougherty et al., US 6,076,734 filed 10/10/1997 discloses an encoded physical medium which enables a user to interact with a computer system. Wellner, US 5,640,193 filed 8/15/1994 discloses enabling a user to control the selection of electronic multimedia services by scanning reading marks located on a physical object. Dougherty et al., US 6,256,638 B1 filed 4/14/1998 discloses printable interfaces and digital linkmarks to improve the human/computer interface. Lange et al., "Insight Lab: An Immersive Team Environment Linking Paper, Displays, and Data", Computer-Human Interactions, April 1998, pages 550-557 discloses the use of barcodes to link papers and whiteboard printouts to multimedia data stored in a computer. Newman et al., "A Desk Supporting Computer-based Interaction with Paper Documents", Computer-Human Interactions, May 1992, pages 587-592 discloses a system which enables people to interact with ordinary paper documents in ways normally possible only with electronic documents.


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 571-272-4101. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
November 18, 2004


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER